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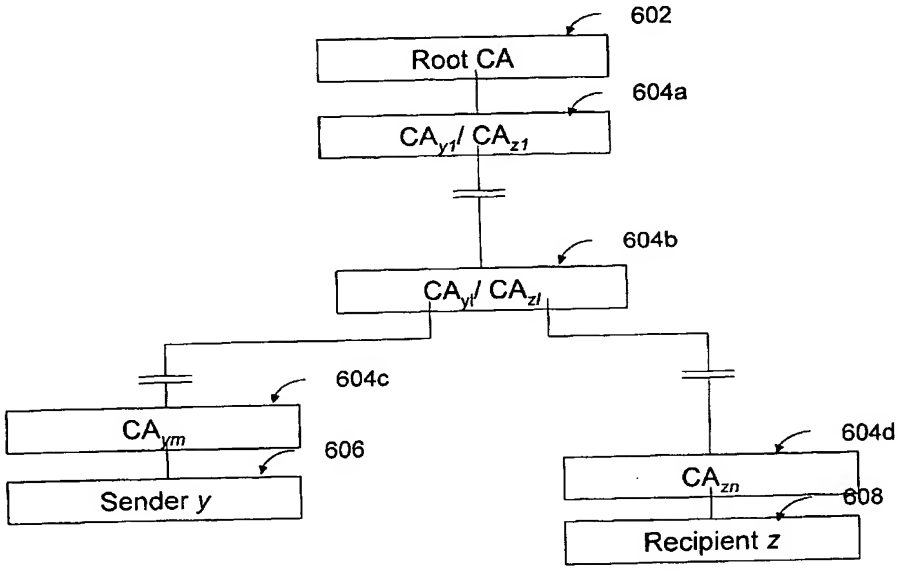
(54) Title: CERTIFICATE-BASED ENCRYPTION AND PUBLIC KEY INFRASTRUCTURE



(57) Abstract: The present invention provides methods for sending a digital message from a sender (606) to a recipient (608) in a public-key based cryptosystem comprising an authorizer (606). The authorizer can be a single entity (606) or comprise a hierarchical or distributed entity (602, 604a-604b). The present invention allows communication of messages by an efficient protocol, not involving key status queries or key escrow, where a message recipient (608) can decrypt a message from a message sender (606) only if the recipient (608) possesses up-to-date authority from the authorizer. The invention allows such communication in a system comprising a large number (e.g. millions) of users.

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